Dr. D.Y. Patil Vidyapeeth's
Dr. D. Y. Patil Biotechnology and Bioinformatics Institute
Mumbai-Bangalore Express High way, Tathawade, Pune 411033
Mail: info.biotech@dpu.edu.in, **Website:** http://biotech.dpu.edu.in

DR. ADITEE RANE

Designation: Assistant Professor

Email ID: aditee.rane@dpu.edu.in

Qualification: M.Sc. (Physics), Ph.D.

Area of Specialization: Experimental High Energy Physics

Research Interest: Search for Beyond Standard Model Physics with LHC data, Scientific computing

EDUCATIONAL QUALIFICATIONS:

Ph.D. – Indian Institute of Science Education and Research, Pune
M.Sc. Physics - University Department of Physics, Kalina, Mumbai
B.Sc. (Hons.) Physics - S.H. Kelkar College, Devgad, Sindhudurg
GATE (2012, 2014), JEST (2012, 2014) and CSIR NET-LS (2014) qualified in Physical Sciences

ACADEMIC AND RESEARCH EXPERIENCE:

Assistant Professor at Dr. D. Y. Patil Biotechnology and Bioinformatics Institute (Aug 2020-present)
Ph.D. Research Scholar at IISER Pune (Aug 2014-Feb 2020)
Junior Research Fellow at Tata Institute of Fundamental Research, Mumbai (Sep 2010-Aug 2012)
Lecturer at Shri Pancham Khemraj Mahavidyalaya, Sawantwadi (Jul 2013-Apr 2014) and Junior College of Science, Rajapur (Aug 2009-May 2010)

AWARDS AND ACHIEVEMENTS:

Certificate for submitting experimental proposal with team "PEARS" representing India at eighth edition of Beamline for Schools held at Geneva [April 2021]

Recognized as one of the best students at SERC School in Experimental High Energy Physics at Delhi University [2016]

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REVIEWER:

INTERNATIONAL ADVISORY COMMITTEE MEMBER:

SCIENTIFIC COMMITTEE MEMBER:

Expert member for a Master Thesis Evaluation Committee of MS project "Semiparametric graph neural networks for energy regression of hadron showers in the CMS High Granularity Calorimeter" by Nitish K V from IISER, Pune

PUBLICATIONS:

1. Search for Supersymmetry in multijet events with missing transverse momentum in protonproton collisions at 13 TeV , Phys. Rev. D 96, 032003 (2017)
2. Search for Supersymmetry in proton proton collisions at 13 TeV in final states with jets and missing transverse momentum, Journal of High Energy Physics, 2019, 244 (2019)
3. Search for new physics in multijet events with at least one photon and large missing transverse momentum in proton-proton collisions at 13 TeV , Journal of High Energy Physics, 2023,46 (2023)

BOOK CHAPTERS:

1. Searching for SUSY with Multijets and Missing Transverse Momentum, XXII DAE High Energy Physics Symposium, Proceedings, Delhi, India, December 12 -16, 2016

CONFERENCE PROCEEDINGS:

1. Search for supersymmetry in events with jets and missing transverse momentum in proton-proton collisions at 13 TeV, Proceedings of Science, Volume 282, ICHEP2016 (2017)

CERTIFICATIONS:

Certificate of completion of Faculty Development Program in Applied Machine Learning, AI and Its applications using Python organized by Edux Labs (Apr-May 2022)

Online courses on Python and Intro to Machine Learning on kaggle platform (Aug 2020 -Jul 2021)

EPIGEUM (Research Skill Courses):

CONFERENCES (Abstracts/Oral/Poster):

XXII DAE-BRNS HEP Symposium, University of Delhi [Dec, 2016]

Presented a talk "Searching for Supersymmetry with multijets and missing transverse momentum at 13 TeV"

CMS Collaboration Week at TIFR, Mumbai [Nov, 2016]

Presented a talk "FastSim: Calorimeter Shower Studies"

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WORKSHOPS:

Visited CERN, Geneva for a collaborative work on CMS Calorimeter Studies [May-June, 2017]

Attended SERC School in Experimental High Energy Physics at Delhi University [April, 2016]

BIOINFORMATICS AND BIOTECHNOLOGY SKILLS:

Teaching the course "Biomedical Devices and Instruments" to B.Tech. Medical 3rd year students